

113. The method of claim 112, wherein the ablation device comprises at least one ablation element.

114. The method of claim 113, wherein the at least one ablation element is an antenna.

115. The method of claim 112, wherein the ablation energy is one or more energies from the group consisting of: radiofrequency, microwave, and cryogenic.

116. The method of claim 112, wherein the means for directionally controlling the ablation energy is a shield device adapted to direct the ablation energy in a single direction along a longitudinal axis of the ablation device, whereby the step of applying ablation energy results in the creation of a continuous lesion.

117. The method of claim 116, wherein the step of applying ablation energy results in the isolation of at least one pulmonary vein from the epicardial surface of a patient's heart.--

REMARKS

Claims 81-117 have been added. Claims 1-80 have been cancelled, without prejudice. Claims 81-117 are now pending in this case. Support for the newly added claims can be found throughout the application as originally filed.

If the Examiner believes a telephone interview would assist in the prosecution of the above-identified application, the Examiner is invited to telephone the undersigned at (510) 651-7430.

While Applicants believe no fee is required, Applicants request that any fee or additional fee due be charged to, or any overpayment credited to, Deposit Account No. 50-1894. Applicant is entitled to Small Entity Status under 37 C.F.R. §1.27.

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Appendix of Pending Claims

All currently pending claims are reproduced below for the Examiner's convenience.

81. An energy delivery device for ablating biological tissue, comprising:
a flexible ablation assembly, comprising:
a flexible ablation device; and
a means for directionally controlling ablation energy emitted therefrom.
82. The device of claim 81, wherein the flexible ablation device comprises at least one ablation element for emitting ablation energy sufficient to ablate biological tissue.
83. The device of claim 82, wherein the flexible ablation assembly defines an outer ablation surface from which ablation energy is emitted.
84. The device of claim 83, wherein the at least one ablation element is flexible.
85. The device of claim 84, wherein the at least one flexible ablation element is disposed within the ablation assembly.
86. The device of claim 83, wherein the ablation assembly further comprises an insulating element, the insulating element holding the ablation element in a fixed position relative to the ablating surface.
87. The device of claim 86, wherein an exterior surface of the insulating element defines the outer ablation surface.
88. The device of claim 87, wherein the insulating element is adapted to be substantially transparent to the ablation energy emitted therethrough by the at least one flexible ablation element.

89. The device of claim 88, wherein the means for directionally controlling the ablation energy is flexible.
90. The device of claim 87, wherein the means for directionally controlling the ablation energy is a shield device, whereby a portion of biological tissue adjacent to the ablation surface is shielded from the ablation energy.
91. The device of claim 90, wherein the shield device is adapted to at least partially reflect ablation energy emitted by the at least one ablation element.
92. The device of claim 91, wherein the shield device is flexible.
93. The device of claim 92, wherein the at least one ablation element is an antenna adapted to emit electromagnetic energy.
94. The device of claim 93, wherein the at least one ablation element is adapted to emit electromagnetic energy in the microwave range.
95. The device of claim 94, wherein the electromagnetic energy is at about 434 MHz.
96. The device of claim 94, wherein the electromagnetic energy is at about 915 MHz.
97. The device of claim 94, wherein the electromagnetic energy is at about 2.45 GHz.
98. The device of claim 94, wherein the electromagnetic energy is at about 5.8 GHz.
99. The device of claim 94, wherein the antenna is a helical coil antenna.
100. The device of claim 94, wherein the antenna is a linear antenna.

101. The device of claim 90, wherein a longitudinal axis of the insulating element is generally coaxial with a longitudinal axis of the shield device.

102. The device of claim 81 further comprising a means for manual manipulation of the flexible ablation assembly.

103. The device of claim 102, wherein the manipulating means is a handle having proximal and distal ends, the flexible ablation assembly being operably attached to the distal end of the handle.

104. The device of claim 102, wherein the manipulating means is an elongated tubular member.

105. The device of claim 103 further comprising a shaft member operably disposed between the flexible ablation assembly and the handle.

106. The device of claim 105, wherein the shaft member is rigid.

107. The device of claim 106, wherein the shaft member is a metallic tube.

108. The device of claim 104, wherein the shaft member is malleable.

109. The device of claim 108, wherein the shaft member is a metallic tube.

110. The device of claim 108, wherein the shaft member is a coaxial cable.

111. An energy delivery device for ablating biological tissue, comprising:

a flexible ablation assembly defining an outer ablation surface from which ablation energy sufficient to ablate biological tissue is emitted,

wherein the ablation assembly is adapted to be manipulated to one of a plurality of contact positions to generally conform the ablation surface to the biological tissue during tissue ablation.

112. A method of ablating tissue at a target tissue site, comprising the steps:

providing a flexible ablation device defining an outer ablation surface and comprising a means for directionally controlling ablation energy emitted therefrom;

manipulating the distal portion of the ablation device to generally conform the ablation surface to a tissue surface at the target tissue site;

applying ablation energy sufficient to ablate tissue at the target tissue site.

113. The method of claim 112, wherein the ablation device comprises at least one ablation element.

114. The method of claim 113, wherein the at least one ablation element is an antenna.

115. The method of claim 112, wherein the ablation energy is one or more energies from the group consisting of: radiofrequency, microwave, and cryogenic.

116. The method of claim 112, wherein the means for directionally controlling the ablation energy is a shield device adapted to direct the ablation energy in a single direction along a longitudinal axis of the ablation device, whereby the step of applying ablation energy results in the creation of a continuous lesion.

117. The method of claim 116, wherein the step of applying ablation energy results in the isolation of at least one pulmonary vein from the epicardial surface of a patient's heart.